AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method of controlling Reverse Power Control (RPC) channel power in a HDR network the method comprising:

receiving a data rate request from an access terminal; and

setting a transmit power of a RPC channel for said access terminal based at least in part on said data rate request by:

estimating reception conditions at said access terminal by estimating a carrier-to-interference (C/I) ratio for said access terminal based on said data rate request; and

adjusting said estimated C/I ratio depending on a handoff condition of said access terminal; and

setting said RPC channel power based in at least in part on said estimated C/I ratio.

2. – 3. Cancel.

4. (Previously Presented) The method of claim 1 further comprising:

defining one or more bounds for said estimated C/I ratio using one or more bounding values; and

setting said estimated C/I ratio to one of said bounding values when a calculated value for said estimated C/I ratio violates one of said bounds.

5. Cancel.

6. (Previously Presented) The method of claim 1 wherein adjusting said estimated C/I ratio depending on a handoff condition of said access terminal comprises reducing said estimated C/I ratio when said access terminal is in a soft handoff condition.

7. (Previously Presented) The method of claim 1 wherein, at a given sector in said network in which said access terminal has an active connection, adjusting said estimated C/I ratio depending on a handoff condition of said access terminal comprises:

reducing said C/I ratio by a first amount when said sector is the serving sector for said access terminal; and

reducing said C/I ratio by a greater amount when said sector is not the serving sector for said access terminal.

8. (Original) The method of claim 7 wherein receiving a data rate request from an access terminal comprises receiving a Data Rate Control (DRC) symbol via a DRC channel from said access terminal, said DRC symbol having a value corresponding to a defined data rate.

9. (Original) The method of claim 8 further comprising determining whether said sector is the serving sector based on a DRC cover value used by said access terminal for said DRC channel.

10. (Original) The method of claim 9 further reducing said estimated C/I ratio by a defined amount when said DRC cover value is a null cover value.

11. (Original) The method of claim 7 further comprising reducing said estimated C/I ratio in inverse proportion to a number of sectors within said network involved in soft handoff with said access terminal.

12. (Original) The method of claim 1 further comprising filtering said estimated C/I ratios for said access terminal to avoid abrupt RPC channel power control changes.

13. – 19. Cancel.

20. (Original) A method of controlling Reverse Power Control channel power in a sector of a HDR network, the method comprising:

estimating required RPC channel powers for a plurality of access terminals active within said sector based on forward link data rates of said access terminals;

determining an aggregate required RPC channel power based on said required RPC channel powers; and

setting an allocated RPC channel power for each one of said plurality of access terminals based on said required RPC channel power for said access terminal and said aggregate required RPC channel power.

21. (Original) The method of claim 20 wherein estimating required RPC channel powers for a plurality of access terminals active within said sector based on forward link data rates of said access terminals comprises for each said access terminal:

inferring reception conditions at said access terminal based on Data Rate Control (DRC) channel information associated with said access terminal and bearing on said forward link data rate of said access terminal; and

estimating said required RPC channel power based on said inferred reception conditions at said access terminal.

22. (Original) The method of claim 21 wherein inferring reception conditions at said access terminal based on Data Rate Control (DRC) channel information associated with said access terminal comprises:

receiving DRC symbols via said DRC channel associated with said access terminal, said DRC symbols indicating a requested forward link data rate for said access terminal; and

estimating a carrier-to-interference (C/I) ratio for said access terminal.

23. (Original) The method of claim 22 wherein estimating said required RPC channel power based on said inferred reception conditions at said access terminal comprises determining said estimated required RPC channel power based on said estimated C/I ratio.

24. (Original) The method of claim 22 further comprising filtering said C/I ratios.

25. (Original) The method of claim 22 further comprising adjusting said C/I ratios when said access terminal is in handoff between sectors.

26. (Original) The method of claim 22 further comprising selecting a default C/I ratio for said C/I ratio during DRC symbol erasure events.

27. (Original) The method of claim 22 further comprising bounding said C/I ratio with at least one of said lower and upper C/I ratio limits.

28. (Original) The method of claim 22 further comprising adjusting said C/I ratio if a DRC cover value of said DRC symbols indicates that said sector is a non-serving sector for said access terminal.

29. (Original) The method of claim 22 wherein estimating said required RPC channel power based on said inferred reception conditions at said access terminal comprises:

determining a desired signal-to-noise ratio (SNR) for said RPC channel at said access terminal; and

calculating said required RPC channel power based on said desired SNR and said C/I ratio.

30. (Original) The method of claim 29 wherein calculating said required RPC channel power based on said desired SNR and said C/I ratio comprises deriving said required RPC channel power from a first expression for received RPC channel bit energy to effective noise power spectral density.

31. (Original) The method of claim 30 wherein said first expression comprises one or more factors arising from multipath reception of said RPC channel at said access terminal, and further comprising assuming default values for said one or more factors.

32. (Original) The method of claim 31 further comprising setting said default values of said one or more factors based on land morphology.

33. (Original) The method of claim 20 further comprising determining an available power for RPC channel power allocation at said sector.

34. (Original) The method of claim 33 wherein determining an available power for RPC channel power allocation at said sector comprises determining said available power as a total Medium Access Control (MAC) channel power available at said sector less an amount needed for Reverse Activity (RA) channel power at said sector.

35. (Original) The method of claim 33 wherein setting an allocated RPC channel power for each one of said plurality of access terminals based on said required RPC channel power for said access terminal and said aggregate required RPC channel power comprises:

determining a scaling value as a ratio between said aggregate required RPC channel power and said available power; and

setting said allocated RPC channel power for each said access terminal by scaling said required RPC channel power by said scaling value.

36. (Original) The method of claim 33 wherein setting an allocated RPC channel power for each one of said plurality of access terminals based on said required RPC channel power for said access terminal and said aggregate required RPC channel power comprises setting said allocated RPC channel power as less than said required RPC channel power for one or more of said access terminals if said aggregate required RPC channel power exceeds said available power at said sector.

37. (Original) The method of claim 33 wherein setting an allocated RPC channel power for each one of said plurality of access terminals based on said required RPC channel power for

said access terminal and said aggregate required RPC channel power comprises setting said allocated RPC channel power as more than said required RPC channel power for one or more of said access terminals if said aggregate required RPC channel power is less than said available power at said sector.

38. (Original) The method of claim 33 wherein setting an allocated RPC channel power for each one of said plurality of access terminals based on said required RPC channel power for said access terminal and said aggregate required RPC channel power comprises:

ordering said required RPC channel powers for said access terminals in ascending order; and

setting said allocated RPC channel powers for said access terminals according to said ascending order as a minimum of said required RPC channel power for each said access terminal and an average RPC channel power computed from a remaining available power.

39. (Original) The method of claim 33 wherein setting an allocated RPC channel power for each one of said plurality of access terminals based on said required RPC channel power for said access terminal and said aggregate required RPC channel power comprises:

ordering said required RPC channel powers for said access terminals in ascending order; and

setting said allocated RPC channel power to said access terminals as said required RPC channel powers until said available power is exhausted.

40. (Currently Amended) A method of admission control in a HDR network, the method comprising:

receiving aggregate estimates of required RPC channel power for one or more sectors in said network by receiving total required Medium Access Control (MAC) channel powers from said one or more sectors, wherein the total required MAC channel power from a given sector comprises the aggregate required RPC channel power for the sector;

monitoring said aggregate estimates in relation to available powers in said one or more sectors to maintain congestion indicators for said one or more sectors; and

controlling call admission in said one or more sectors based on said congestion indicators.

41. Cancel.

42. (Original) The method of claim 40 wherein monitoring said aggregate estimates in relation to available powers in said one or more sectors to maintain congestion indicators for said one or more sectors comprises for each sector:

receiving a number of aggregate estimates from the sector;

determining whether or not said aggregate estimates from the sector indicate congestion in said sector by comparing said aggregate estimates from said sector to at least one threshold bearing on a relationship between said aggregate estimates and an available power at said sector; and

setting said congestion indicator corresponding to said sector if congestion in said sector is indicated by said comparison.

43. (Original) The method of claim 42 wherein determining whether or not said aggregate estimates from the sector indicate congestion in said sector by comparing said aggregate

estimates from said sector to at least one threshold bearing on a relationship between said aggregate estimates and an available power at said sector comprises:

updating a congestion counter if a current aggregate estimate from said sector exceeds an upper threshold and said congestion indicator is not set;

updating a reset counter if said current aggregate estimate from said sector is below a lower threshold;

setting said congestion indicator if said congesting counter reaches a defined congestion count value; and

clearing said congestion counter and said congestion indicator if said reset counter reaches a defined reset count value.

44. (Original) The method of claim 42 wherein determining whether or not said aggregate estimates from the sector indicate congestion in said sector by comparing said aggregate estimates from said sector to at least one threshold bearing on a relationship between said aggregate estimates and an available power at said sector comprises determining whether or not said aggregate estimates generally exceed said available power at said sector.

45. (Original) The method of claim 44 further comprising setting and clearing said congestion indicator based on applying a hysteretic comparison function to said aggregate estimates.

46. (Original) The method of claim 40 wherein controlling call admission in said one or more sectors based on said congestion indicators comprises, for each said sector, denying new

connections with access terminals seeking connection to said network via said sector when said congestion indicator is set.

47. (Original) The method of claim 40 wherein controlling call admission in said one or more sectors based on said congestion indicators comprises, for each said sector, dropping service to one or more access terminals having a connection to said network via said sector when said congestion indicator is set.

48. (Original) A radio base station for use in an HDR network, said radio base station comprising a processor adapted to:

estimate required RPC channel powers for a plurality of access terminals active within a sector of said network supported by said radio base station based on forward link data rates of said access terminals;

determine an aggregate required RPC channel power based on said required RPC channel powers; and

set an allocated RPC channel power for each said access terminal based on said required RPC channel power for said access terminal and said aggregate required RPC channel power.

49. (Original) The radio base station of claim 48 wherein said processor estimates said required RPC channel power for each said access terminal by:

inferring reception conditions at said access terminal based on Data Rate Control (DRC) channel information associated with said access terminal and bearing on said forward link data rate of said access terminal; and

estimating said required RPC channel power based on said inferred reception conditions at said access terminal.

50. (Original) The radio base station of claim 49 wherein said processor infers said reception conditions at said access terminal based on Data Rate Control (DRC) channel information associated with said access terminal by:

receiving DRC symbols via said DRC channel associated with said access terminal, said DRC symbols indicating a requested forward link data rate for said access terminal; and

estimating a carrier-to-interference (C/I) ratio for said access terminal.

51. (Original) The radio base station of claim 50 wherein said processor estimates said required RPC channel power based on said inferred reception conditions at said access terminal by determining said estimated required RPC channel power based on said estimated C/I ratio.

52. (Original) The radio base station of claim 50 wherein said processor is further adapted to filter said C/I ratios.

53. (Original) The radio base station of claim 50 wherein said processor is further adapted to adjust said C/I ratios when said access terminal is in handoff between sectors in said network.

54. (Original) The radio base station of claim 48 wherein said processor is further adapted to transfer information bearing on said aggregate required RPC channel power to a base station controller associated with said radio base station.

55. (Currently Amended) A radio base station controller for use in an HDR network, said radio base station controller comprising a processor adapted to:

receive aggregate estimates of required RPC channel power for one or more sectors in said network by receiving total required Medium Access Control (MAC) channel powers from one or radio base stations associated with said one or more sectors, wherein the total required MAC channel power for a given sector comprises the aggregate required RPC channel power for the given sector;

determine whether or not said aggregate estimates indicate congestion in said one or more sectors; and

control call admission in said one or more sectors based at least in part on indicated congestion as determined from said aggregate estimates.

56. Cancel

57. (Original) The radio base station controller of claim 55 wherein said processor determines whether or not said aggregate estimates indicate congestion in one of said one or more sectors by determining whether said aggregate estimates for said sector generally exceed an available power at said sector.

58. (Original) The radio base station controller of claim 55 wherein said processor determines whether or not said aggregate estimates indicate congestion in one of said one or

more sectors by comparing said aggregate estimates from said sector to at least one threshold bearing on a relationship between said aggregate estimates and an available power at said sector.

59. (Original) The radio base station controller of claim 55 wherein said processor determines whether or not said aggregate estimates indicate congestion in said one or more sectors by monitoring said aggregate estimates for said one or more sectors in relation to available powers in said one or more sectors.

60. (Original) The radio base station controller of claim 59 wherein said processor maintains one or more congestion indicators for said one or more sectors based on said monitoring of said aggregate estimates.

61. (Original) The radio base station controller of claim 60 maintains said one or more congestion indicators by :

receiving a number of aggregate estimates for each sector;

determining whether or not said aggregate estimates from the sector indicate congestion in said sector by comparing said aggregate estimates from said sector to at least one threshold bearing on a relationship between said aggregate estimates and an available power at said sector; and

setting said congestion indicator corresponding to said sector if congestion in said sector is indicated by said comparison.

62. (Original) The radio base station controller of claim 61 wherein said processor sets and clears said congestion indicator by applying a hysteretic comparison function to said aggregate estimates.

63. (Original) The radio base station controller of claim 55 wherein said processor determines whether or not said aggregate estimates indicate congestion in each one of said one or more sectors by:

updating a congestion counter if a current aggregate estimate from the sector exceeds an upper threshold and said congestion indicator is not set;

updating a reset counter if said current aggregate estimate from said sector is below a lower threshold;

setting said congestion indicator if said congesting counter reaches a defined congestion count value; and

clearing said congestion counter and said congestion indicator if said reset counter reaches a defined reset count value.

64. (Previously Presented) The method of controlling Reverse Power Control (RPC) channel power in a HDR network the method comprising:

receiving data rate requests from a plurality of access terminals at a sector within said network; and

setting RPC channel powers for said plurality of access terminals based at least in part on said data rate requests by:

estimating reception conditions at said access terminals based on said data rate requests;

estimating required RPC channel powers for said access terminals based on said estimated reception conditions;

determining an aggregate required RPC channel power based on said required RPC channel powers estimated for said access terminals; and

setting allocated RPC channel powers for said access terminals based on said required RPC channel powers and on said aggregate required RPC channel power.

65. (Previously Presented) The method of claim 64 wherein setting allocated RPC channel powers for said access terminals based on said required RPC channel powers and on said aggregate required RPC channel power comprises setting said allocated RPC channel power for one or more ones of said access terminals to be less than said required RPC channel powers estimated for said one or more ones of said access terminals if said aggregate required RPC channel power exceeds an available power at said sector.

66. (Previously Presented) The method of claim 65 wherein setting said allocated RPC channel power for one or more ones of said access terminals to be less than said required RPC channel powers estimated for said one or more ones of said access terminals if said aggregate required RPC channel power exceeds an available power at said sector comprises setting said allocated RPC channel powers for said one or more ones of said access terminals such that an aggregate allocated RPC channel power of said access terminals does not exceed said available power.

67. (Previously Presented) The method of claim 66 further comprising setting said allocated RPC channel powers to be at least equal to said required RPC channel powers for one or more other ones of said access terminals.

68. (Previously Presented) The method of claim 64 wherein setting allocated RPC channel powers for said access terminals based on said required RPC channel powers and on said aggregate required RPC channel power comprises setting said allocated RPC channel powers to be at least equal to said required RPC channel power for selected ones of said access terminals.

69. (Previously Presented) The method of claim 64 wherein setting allocated RPC channel powers for said access terminals based on said required RPC channel powers and on said aggregate required RPC channel power comprises:

determining a relationship between said aggregate required RPC channel power and an available power; and

setting said allocated RPC channel power for each one of said access terminals based on said required RPC channel power for said access terminal and said relationship between said aggregate required RPC channel power and said available power.

70. (Previously Presented) A method of controlling Reverse Power Control (RPC) channel power in a HDR network the method comprising:

receiving a data rate request from an access terminal; and

setting a transmit power of a RPC channel for said access terminal based at least in part on said data rate request by:

estimating reception conditions at said access terminal by estimating a carrier-to-interference (C/I) ratio for said access terminal based on said data rate request; and

defining one or more bounds for said estimated C/I ratio using one or more bounding values; and

setting said estimated C/I ratio to one of said bounding values when a calculated value for said estimated C/I ratio violates one of said bounds; and

setting said RPC channel power based in at least in part on said estimated C/I ratio.